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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,983	08/17/2000	Michael L. Lehrman	ILIF01-00056	6192

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EXAMINER

WEISS JR, JOSEPH FRANCIS

ART UNIT PAPER NUMBER

3761

DATE MAILED: 09/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/641,983

Applicant(s)
Lehrman et al.

Examiner
Joseph Weiss

Art Unit
3761



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 17, 2000
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 1 6) ☐ Other:

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: cross reference to a co-pending related application by using applicant's attorney's docket number is not properly notorious to the public. Cross reference using the serial number, or patent number if issued, is necessary to resolve this issue. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
3. Claims 1-2, 4, 6, 11-12, 14 & 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shannon, Jr. et al. (US 5123425).

In regards to claims 1 & 11, Shannon discloses an apparatus for terminating an obstructive sleep apnea even before cessation of breath occurs comprising at least one microphone (24 and supporting text) which detects breathing sounds and which generates signals representative of such; a controller (20) coupled to the microphone capable of receiving such breathing sound signals and identifying signals indicative of the onset of obstructive sleep apnea/a partially occluded airway event and capable of generating an alarm signal (col. 3 lines 25-50), and a stimulus generator (26 & 28 and supporting text) capable of receiving such alarm signals creating

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a stimulus to cause said person to move in a manner that causes said obstructive sleep apnea/partial occlusion event to terminate.

In regards to claims 2 & 12, Shannon discloses the use of an electrical current source (note the use of electrodes, an electrical current source).

In regards to claims 4 & 14, Shannon discloses the use of an electrical current source (note the use of electrodes, an electrical current source).

In regards to claims 6 & 16, Shannon discloses the use of at least one filter (204) for filtering the signal, the filtered signal being indicative of breathing patterns and discerned by the controller as being a indicative of the onset of obstructive sleep apnea/partially occlude airway.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8, 10, 17-18 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon.

In regards to claims 7 & 17, Shannon discloses that an air flow sensor can be utilized with the device, thus one of ordinary skill in the art would consider applicant's use of an air flow sensor with the instant device to be an obvious modification to the device of the prior art. (Col. 3, line 30-35).

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In regards to claims 8 & 18, Shannon discloses the instant application's invention except for an express recitation of the use of "software." However, software is nothing more than a series of commands in an algorithm to be executed a given way, based upon input, feedback, conditions and events. The electronic's module of Shannon performs such algorithmic tasks and thus would be viewed by one of skill in the art as being "programmed" and hence to be comprised of what would be understood as "software." Accordingly, such a limitation under a standard of obviousness would not distinguish the instant application's claimed invention over that of the prior art. (See fig 7 and supporting text in col. 4 lines 5-42).

In regards to claims 10 & 20, operation during $\frac{1}{2}$ of the breathing cycle, the device of Shannon is fully capable of being operated in a manner wherein the controller operates the device for only "one half" of a respiratory cycle.

In regards to method claims 21-22 & 24-29, one of ordinary skill in the art would appreciate that the method steps claimed in the instant application would naturally flow from the device disclosed in the prior art as noted above and therefore are rejected herein above with respect to claims 1-2, 4, 6-8, 10-12, 14, 16-18 & 20.

6. Claims 9 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon as applied to claims 8 & 18 above, and further in view of Schecter et al (US 5058600).

In regards to claims 9 & 19, Shannon substantially discloses the instant application's claimed invention, but does not explicitly disclose using software with Fast Fourier Transform (FFT) analysis. However, Schecter discloses such (Note abstract statement that acoustic signals

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are processed using FFT). The references are analogous since they are from the same field of endeavor, the respiratory arts. At the time the instant application's invention was made, it would have been obvious to one of ordinary skill in the art to have taken the features of Schecter and used them with the device of Shannon. The suggestion/motivation for doing so would have been to effectively process the acoustical data for diagnostic analysis. Therefore it would have been obvious to combine the references to obtain the instant application's claimed invention.

Furthermore, such a feature is old and well known in the art, and one of skill in the art would consider such to amount to a matter of mere obvious and routine choice of design, rather than constitute a patently distinct inventive step, barring a convincing showing of evidence to the contrary.

7. Claims 3 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon as applied to claims 1 & 11 above, and further in view of Lambert (US 5652566).

In regards to claims 3 & 13, Shannon substantially discloses the instant application's claimed invention, but does not explicitly disclose the use of a vibrator or a sound generator. However, Lambert disclose such (24). The references are analogous since they are from the same field of endeavor, the medical monitoring arts. At the time the instant application's invention was made, it would have been obvious to one of ordinary skill in the art to have taken the features of Lambert and used them with the device of Shannon. The suggestion/motivation for doing so would have been to provide additional/redundant alarm systems, insuring the user is stimulated.

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Therefore it would have been obvious to combine the references to obtain the instant application's claimed invention.

Furthermore, such a feature is old and well known in the art, and one of skill in the art would consider such to amount to a matter of mere obvious and routine choice of design, rather than constitute a patently distinct inventive step, barring a convincing showing of evidence to the contrary.

In regards to method claims 23, one of ordinary skill in the art would appreciate that the method steps claimed in the instant application would naturally flow from the device disclosed in the prior art as noted above and therefore are rejected herein above with respect to claims 3 & 13.

8. Claims 5 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon as applied to claims 1 & 11 above, and further in view of Teodorescu et al (US 6011477).

In regards to claims 5 & 15, Shannon substantially discloses the instant application's claimed invention, but does not explicitly disclose a remote base station. However, Teodorescu disclose such (28). The references are analogous since they are from the same field of endeavor, the respiratory arts. At the time the instant application's invention was made, it would have been obvious to one of ordinary skill in the art to have taken the features of Teodorescu and used them with the device of Shannon. The suggestion/motivation for doing so would have been to give the user more range/freedom of movement during use of the device. Therefore it would have been obvious to combine the references to obtain the instant application's claimed invention.

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Furthermore, such a feature is old and well known in the art, and one of skill in the art would consider such to amount to a matter of mere obvious and routine choice of design, rather than constitute a patently distinct inventive step, barring a convincing showing of evidence to the contrary.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5961447, 5797852, 5671733, 5277193, 5265624, 5178156, 5095900, 4802485, 47158367, 4630614, 4619270, 4595016, 4475559, 4146885

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph F. Weiss, Jr., whose telephone number is (703) 305-0323. The Examiner can normally be reached from Monday-Friday from 8:30 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Aaron Lewis, can be reached at telephone number (703) 308-0716. The official fax number for this group is (703) 305-3590 or x3591.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.



J. Weiss

August 29, 2002



GLENN K. DAWSON
PRIMARY EXAMINER